LECTURE 11

Extending the Analysis of Aggregate Supply

McCONNELL | BRUE | FLYNN

macroeconomics

Learning Objectives

- Explain the relationship between short-run aggregate supply and long-run aggregate supply.
- Apply the extended (short-run/long-run) AD-AS model to inflation, recessions, and economic growth.
- Explain the short-run trade-off between inflation and unemployment (the Phillips Curve).
- Explain why there is no long-run trade-off between inflation and unemployment.
- Explain the relationship among tax rates, tax revenues, and aggregate supply.

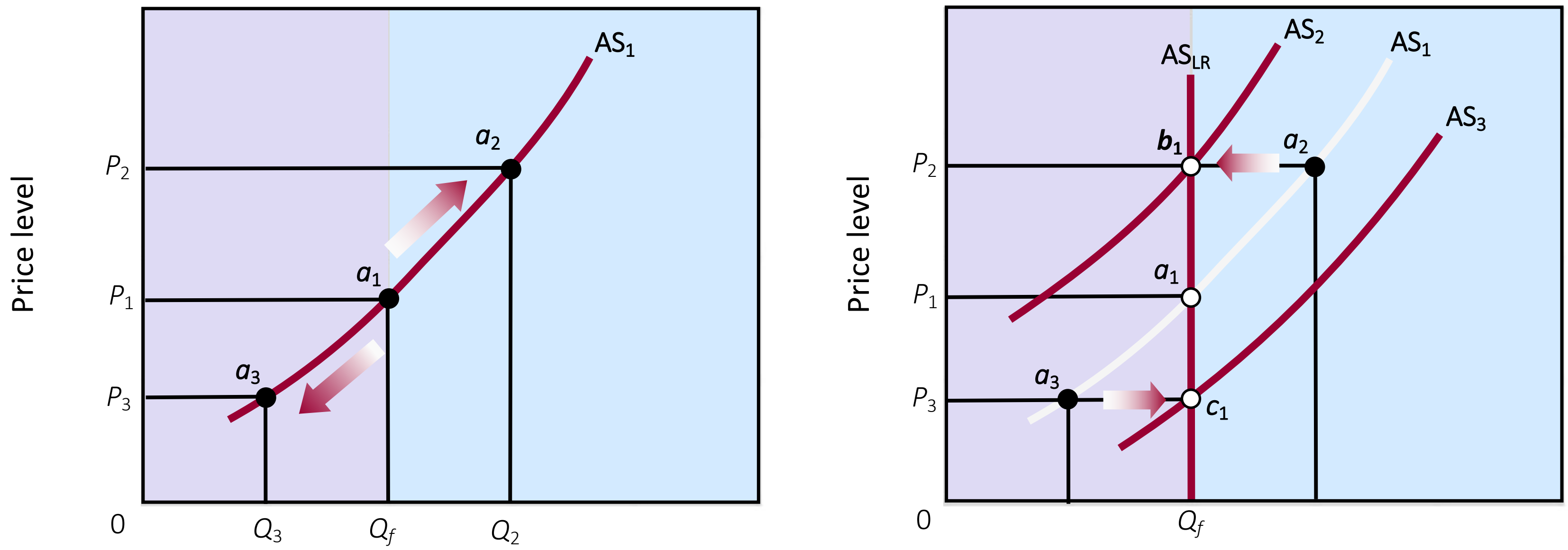
Short Run vs Long Run

- **Short run**
  - Input prices inflexible
  - Upsloping aggregate supply
- **Long run**
  - Input prices fully flexible
  - Vertical aggregate supply
- The transition?

From Short Run to Long Run

- Production above potential output:
    - High demand for inputs
    - Input prices rise
    - Short-run aggregate supply shifts left
    - Return to potential output
- Production below potential output
- Graphical examples…

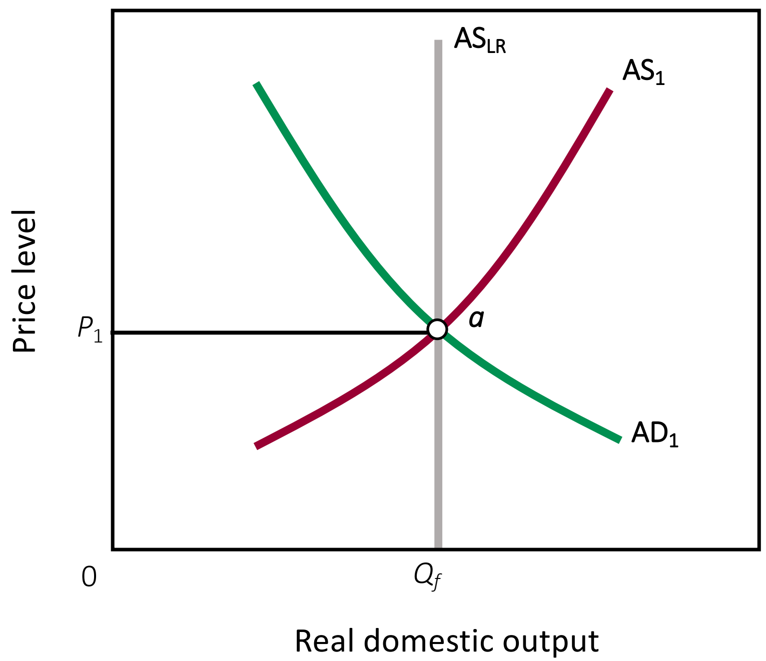
Short-Run and Long-Run Aggregate Supply



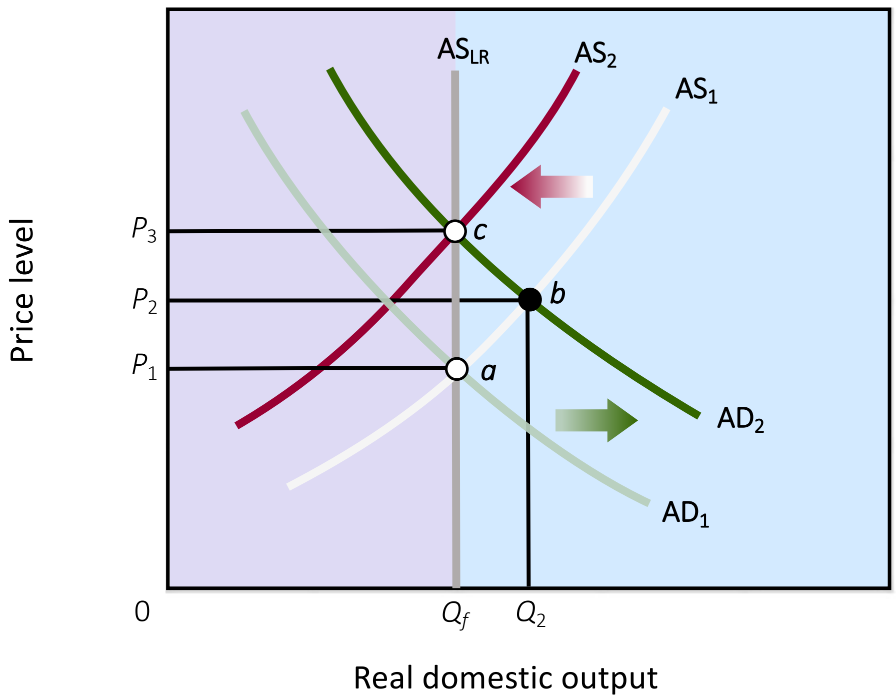
Real domestic output
(a)
Short-run aggregate supply

Real domestic output
(b)
Long-run aggregate supply

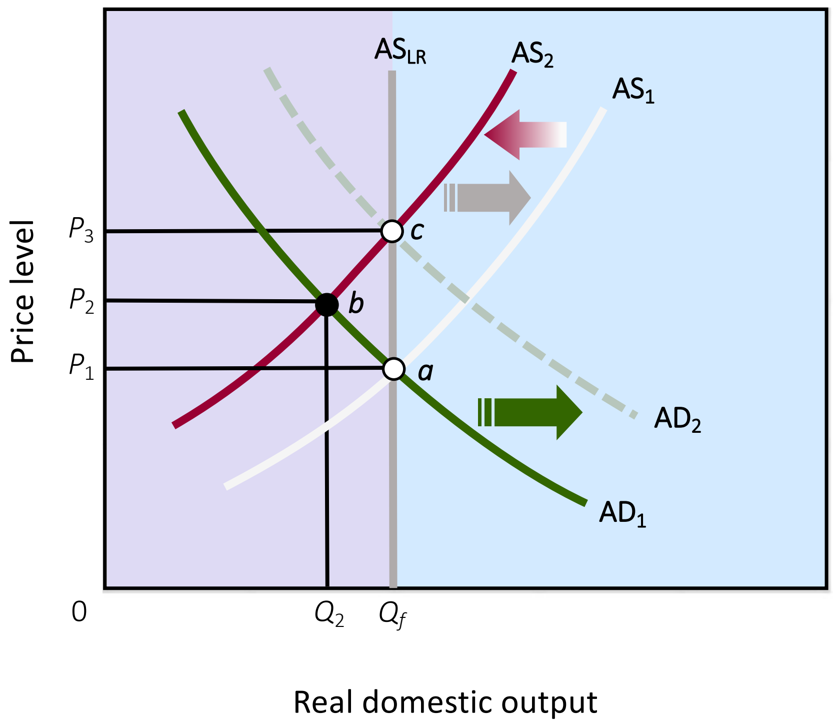
Equilibrium in the Long-Run AD-AS Model



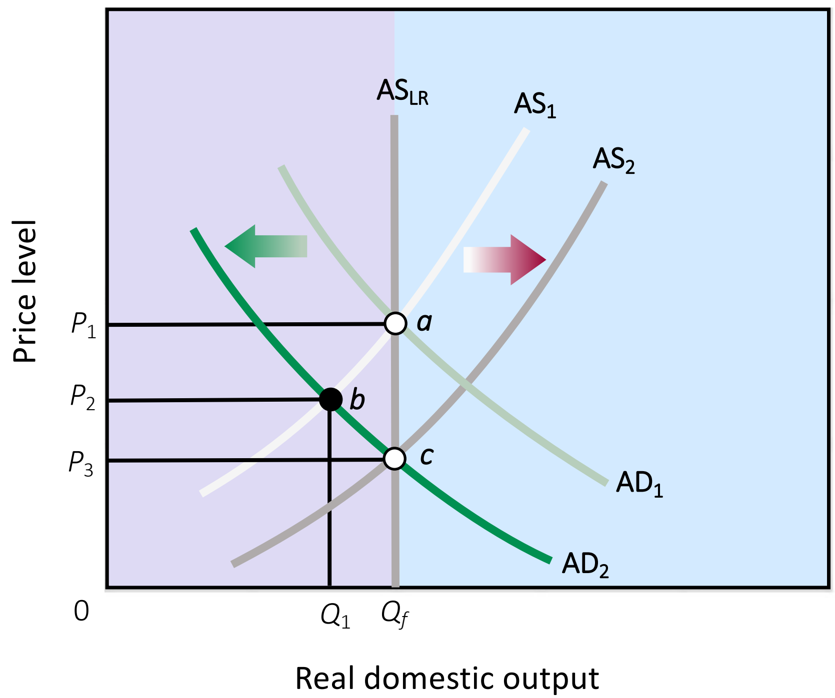
Demand-Pull Inflation in the Extended AD-AS Model



Cost-Push Inflation in the Extended AD-AS Model



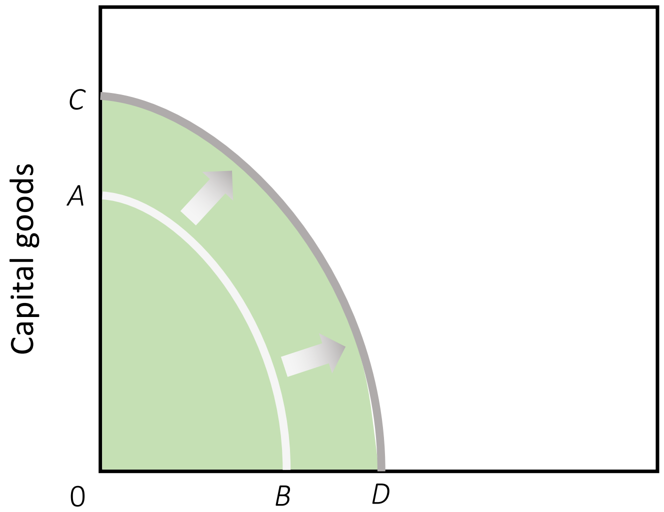
Recession in the Extended AD-AS Model



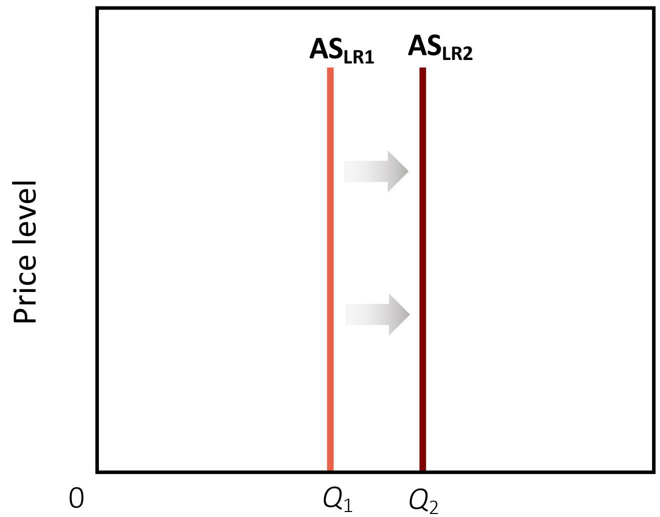
Extended AD-AS Model Uses

- Explaining ongoing inflation:
    - Ongoing economic growth shifts aggregate supply.
    - Ongoing increases in money supply shift aggregate demand.
- Small positive rate of inflation.

Production Possibilities and Long-Run Aggregate Supply

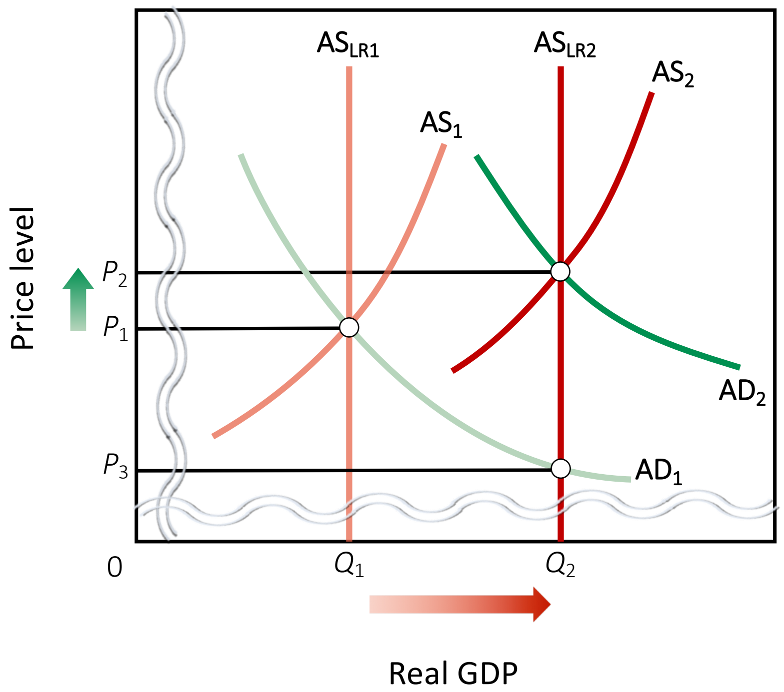


Consumer goods
(a)
Increase in production possibilities



Real GDP
(b)
Increase in long-run aggregate supply

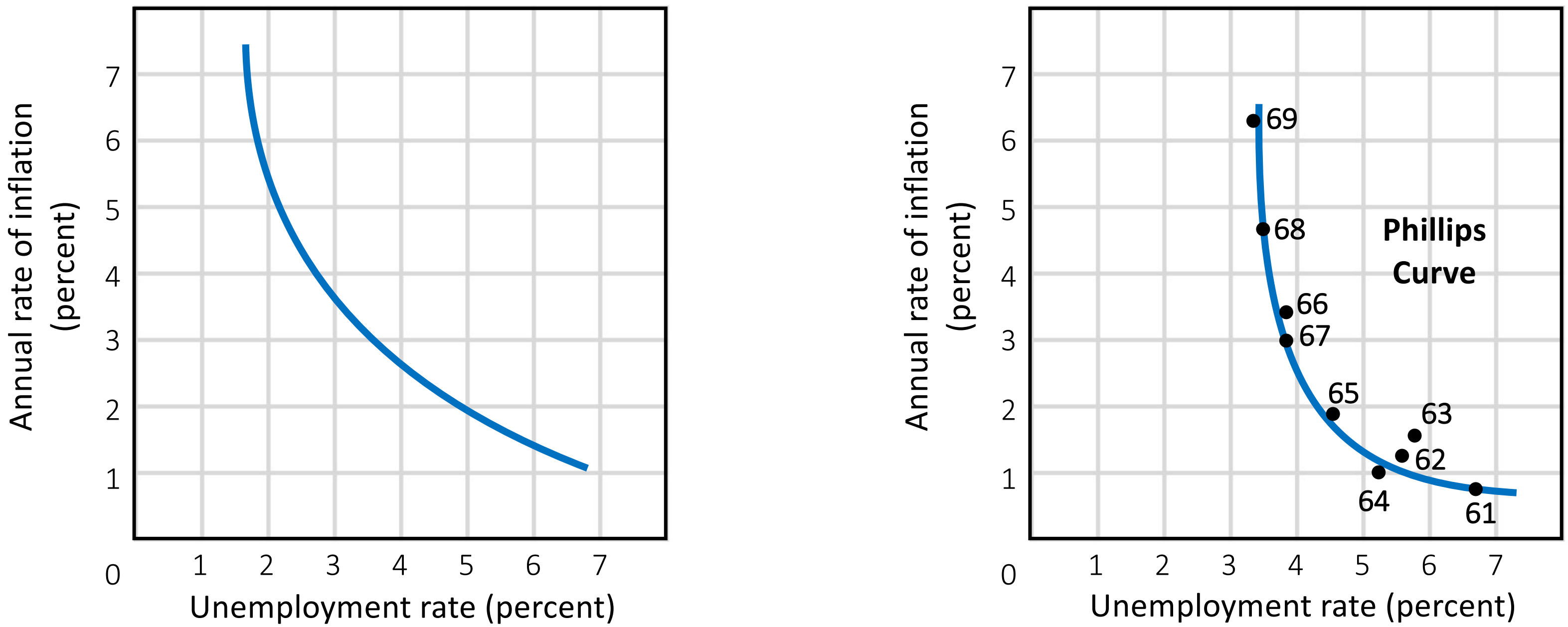
Growth via the AD-AS Model



Inflation and Unemployment

- Low inflation and low unemployment rates:
  - Fed' s major goals
  - Compatible or conflicting?
- Short-run tradeoff.
- **Aggregate supply shocks** cause both rates to rise.
- No long-run tradeoff.

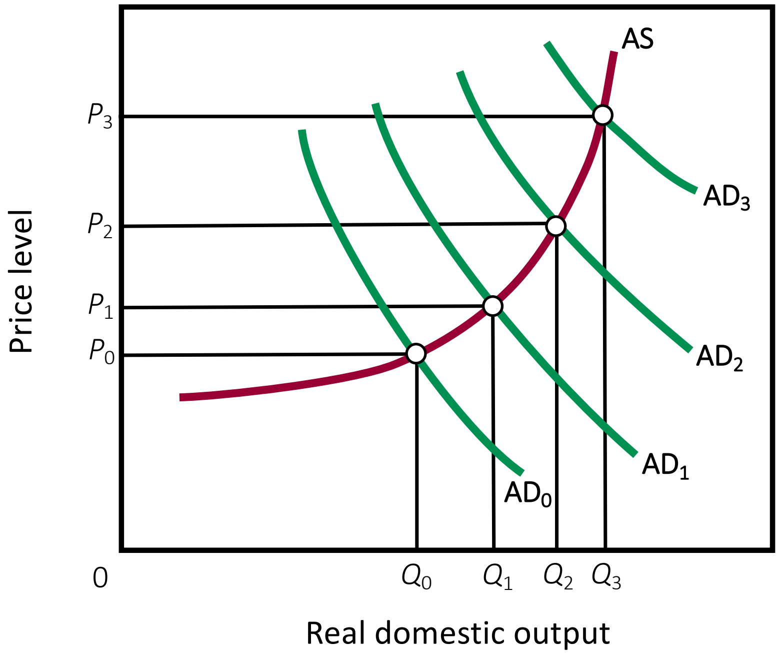
The Phillips Curve: Concept and Empirical Data



(a)
The concept

(b)
Data for the 1960s

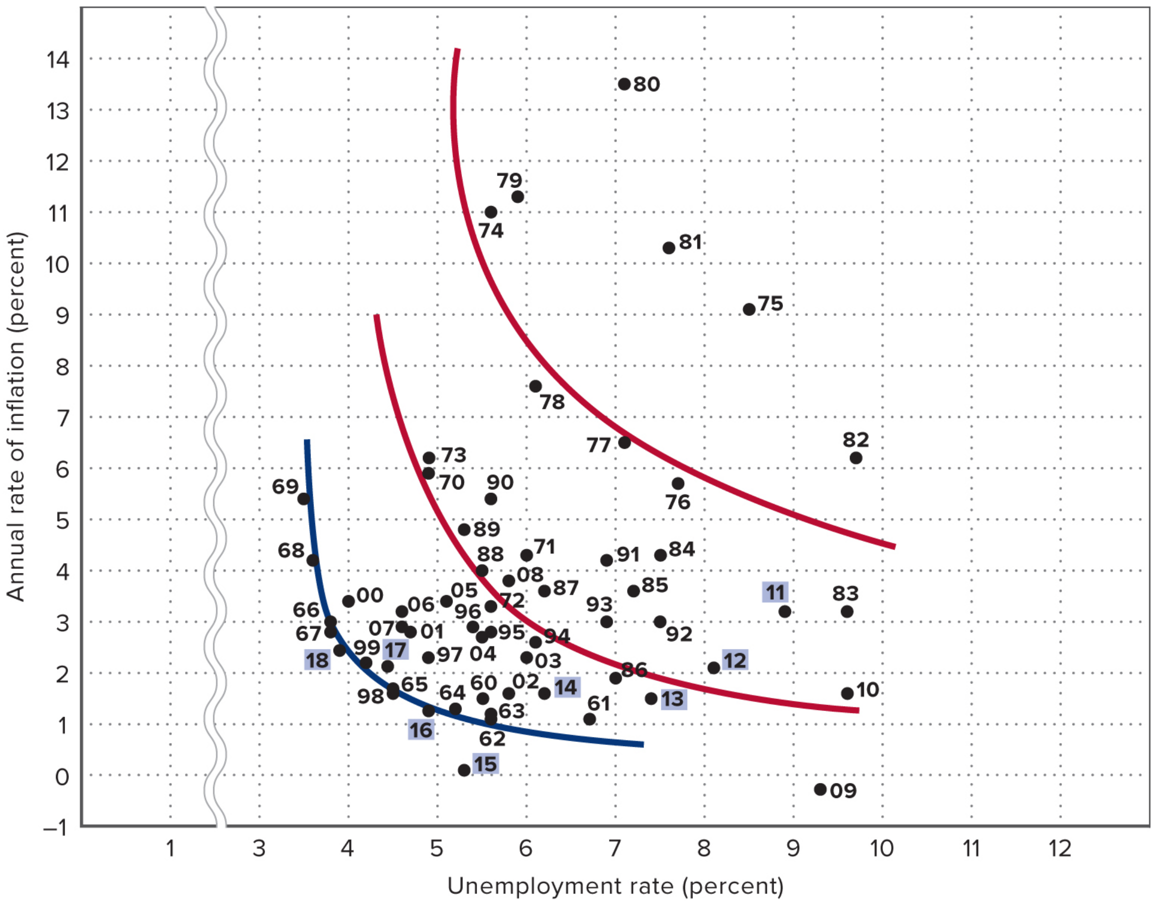
SR Effect of Changes in AD on Real Output and the Price Level



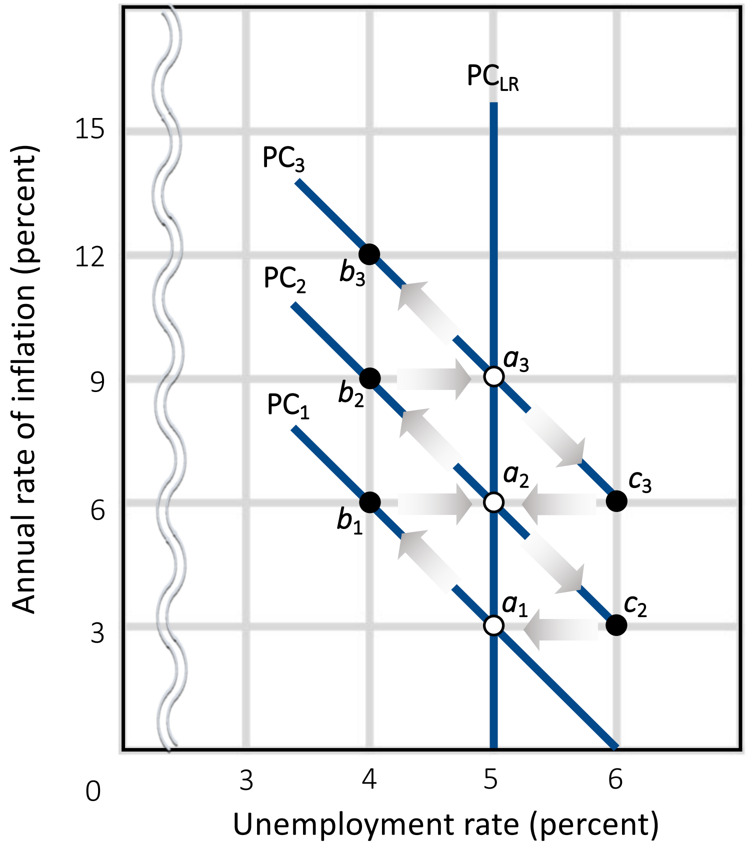
The Phillips Curve: Supply Shocks

- 1960s economists believed in stable, predictable tradeoff.
- **Phillips Curve** shifts over time.
- Adverse supply shocks 1970s:
  - OPEC oil price shock
  - **Stagflation**
- Stagflation’ s demise 1980s.

Inflation Rates and Unemployment Rates, 1960–2018



The Long-Run Vertical Phillips Curve



The Long-Run Phillips Curve

- No long-run tradeoff between inflation and unemployment.
- Short-run Phillips Curve: Role of expected inflation
- **Long-run vertical Phillips Curve**
- **Disinflation**

The Laffer Curve

Supply-side economics

- Tax and incentives to work
- Incentives to save and invest